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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/690,580	10/17/2000	Vladislav Vashchenko	NSC1-H1500	3449

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EXAMINER

FARAHANI, DANA

ART UNIT	PAPER NUMBER
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2814

DATE MAILED: 11/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (AAPA), previously cited, in view of Takemura (U.S. Patent 5,587,326), newly cited.

AAPA discloses in figure 1 a collector layer 14, base layer 16, emitter 18, dielectric layer 32, an emitter contact 28, and a base contact 24.

AAPA does not disclose the width of the top surface of the emitter contact is greater than that of the emitter.

Takemura discloses in figure 1 emitter contact 25a has a wider upper portion. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to make the emitter contact of AAPA with a wider upper portion to adjust the resistance distribution of the emitter contact.

3. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA in view of Takemura as applied to claim 25 above, and further in view of Shakuda (U.S. Patent 6,376,866), previously cited.

AAPA in view of Takemura discloses the limitations in the claim, as discussed above, except for the base extender 226, which is polysilicon, having a different material than the first semiconductor material.

Shakuda discloses that a single silicon substrate is inexpensive and advantageous in device manufacturing. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to make the device of AAPA in a single crystal body, since it would have been cheaper and easier to produce.

Allowable Subject Matter

4. Claims 10-17, 20-24, and 28-32 are allowed.
5. The following is a statement of reasons for the indication of allowable subject matter:

The primary reason for the indication of the allowability of claims 14-17, 20-24 and 28-32 is the inclusion therein, in combination as currently claimed, of the limitation of the heat sink contact formed through the dielectric layer, contacting the top surface of the base region. This limitation is found in claims 14-17 and 20-24, and neither disclosed nor thought by the prior art of record, alone or in combination.

The primary reason for the indication of the allowability of claims 10-13 is applicant's argument that AAPA does not disclose an emitter contact wider than the emitter, and a base contact thinner than the emitter contact.

Response to Arguments

6. Applicant's arguments with respect to the claims have been considered but are moot in view of the new grounds of rejection.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dana Farahani whose telephone number is (571)272-1706. The examiner can normally be reached on M-F 9:00AM - 6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael Fahmy can be reached on (703)308-4918. The fax phone numbers for the organization where this application or proceeding is assigned are (703)308-7722 for regular communications and (703)308-3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.

D. Farahani



LONG FINAL
PRIMARY EXAMINER